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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/588,534

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Jean-Marie Gouot

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EXAMINER

SULLIVAN, DANIELLE D

ART UNIT

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1616

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/588,534	Applicant(s) GOUOT ET AL.	
	Examiner DANIELLE SULLIVAN	Art Unit 1616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 August 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>08/07/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

Claims 2-12 and 14-16 are objected to because of the following informalities:

'characterised' should be spelled 'characterized'. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 2-12 and 14-16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The term "characterised in that" is a vague and indefinite term. The language is describing the structure as having the quality of or characteristic of a particular structure. The statement implies that the structure is similar to but not necessarily as disclosed. For the purpose of examination the statement will be treated as to denote where the disclosed value pertains to the variables of formula (I).

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 1-9 and 12-16 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for carbendazim, a benzimidazole derivative,

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does not reasonably provide enablement for all compounds capable of inhibiting mitosis and cell division. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Attention is directed to *In re Wands*, 8 USPQ2d 1400 (CAFC 1988) at 1404 where the court set forth the eight factors to consider when assessing if a disclosure would have required undue experimentation. Citing *Ex parte Forman*, 230 USPQ 546 (BdApls 1986) at 547 the court recited eight factors:

- 1) the nature of the invention
- 2) the state of the prior art
- 3) the relative skill of those in the art
- 4) the predictability of the art
- 5) the breadth of the claims
- 6) the amount of direction or guidance provided
- 7) the presence or absence of working examples
- 8) the quantity of experimentation necessary

The instant specification fails to provide guidance that would allow the skilled artisan to practice the instant invention without resorting to undue experimentation, as discussed in the subsections set forth herein below.

The nature of the invention.

The claimed invention relates to a fungicidal composition comprising a pyridylethylbenzamide derivative and a compound capable of inhibiting mitosis and cell division.

The state of the prior art & predictability of the art

It is generally accepted determining the activity of various chemical compounds requires testing in order to determine toxicity and study how they are metabolized by the

body. Since, new compounds are always being discovered that may or may not possess desired properties the results are often unpredictable.

The breadth of the claims

The recitation of a compound capable of inhibiting mitosis and cell division indicates a plethora of structures. The bioavailability and efficacy of all such structures is not known.

The presence or absence of working examples

The specification provides detailed evaluation of a composition comprising a benzimidazole derivative, carbendazim. However, there is no indication of the efficacy or bioavailability of all compounds capable of inhibiting mitosis and cell division.

The quantity of experimentation necessary & relative skill in the art

To determine how to prepare all compositions comprising a compound capable of inhibiting mitosis and cell division would require undue experimentation for one skilled in the art.

Therefore, the specification does not provide enablement for all compounds capable of inhibiting mitosis and cell division. In conclusion, lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or use the full scope of the claimed invention without undue experimentation. *In re Wright*, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim 16 is rejected under 35 U.S.C. 102(e) as being anticipated by Cooke et al. (US 6,821,992).

Cooke et al. teach a method of combating fungal pests such as pathogenic fungi at a locus infested or liable to be infested with pathogens by applying a compound of formula (I) (column 5, lines 25-29). The compound may be formulated into a composition comprising one or more additional active ingredients (column 5, lines 336-40). Such active ingredients would include a compound capable of inhibiting mitosis and cell division. The invention can be applied directly to the plant, roots, fruits, seeds or their habitat to control the growth of fungi before or after infestation (column 6, line 62 thru column 7, line 27).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

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invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cooke et al. (US 6,821,992) in view of Brandes et al. (5,532,262), and Hammond et al. (Exploring the mechanisms of action of FB642 at the cellular level, 2001).

Applicant's Invention

Applicant claims a fungicidal composition comprising a) a pyridylethylbenzamide derivative of formula (I) and b) a compound capable of inhibiting mitosis and cell division, such as a benzimidazole or diethofencarb, in a a) / b) weight ratio of from 0.01 to 20 (percent by weight of 0.01% to 20% or an a:b ratio of 0.01:1 to 20:1 or 1:0.05 to 1:100). The composition may further comprise a fungicidal compound, such as iprodione as well as an agriculturally acceptable support, carrier, filler and/or surfactant.

Determination of the scope and the content of the prior art

(MPEP 2141.01)

Cooke et al. teach fungicide of formula (I) which embraces the pyridylethylbenzamide derivative claimed in claims 1-9, where the 2-pyridyl group may be substituted by up to four groups at least one of which is haloalkyl and the phenyl group may be substituted with alkyl, alkoxy, halogen, haloalkyl, etc. (column 1, lines 20-37, column 2, lines 22-55). The compounds may be formulated into compositions which can comprise one or more additional active ingredients known to possess a plant-growth regulant, herbicidal, fungicidal, etc. properties (column 5, lines 36-40). The concentration of the active ingredient can vary widely from 5 to 95 % by weight of the

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composition. Additional ingredients include a carriers, surfactants, etc. (column 5, lines 42 thru column 6, line 51).

Ascertainment of the difference between the prior art and the claims

(MPEP 2141.02)

Cooke et al. do not teach a component capable of inhibiting mitosis and cell division. It is for this reason that Hammond et al. is joined. Hammond et al. teach that the benzimidazole, carbendazim (FB643) is fungicide known to interfere with cell cycle and mitosis (abstract; page 301, column 1, paragraph 1).

Cooke et al. do not teach the additional active ingredients of the composition are carbendazim or diethofencarb and iprodione. It is for this reason that Brandes et al. is joined. Brandes et al. teach a fungicidal composition which comprises a compound in which may be combined with carbendazim and/or diethofencarb and/or iprodione and/or benomyl (a benzimidazole)

Finding of prima facie obviousness

Rationale and Motivation (MPEP 2142-2143)

It would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Cooke et al. and Hammond et al. to further include the benzimidazole carbendazim. One would have been motivated to include carbendazim because it is a fungicide known to interfere with mitosis and cell division. In view of *In re Kerkhoven* 206 USPQ 1069 (C.C.P.A. 1980), it would be prima facie obvious to combine two compositions, in this case two fungicides, each of which is

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taught by the prior art to be useful for the same purpose in order to form a third composition that is to be used for the very same purpose. Likewise, it would have been obvious to one of ordinary skill in the art at the time of the invention to combine the teachings of Cooke et al. and Brandes et al. to further include combining the pyridylethylbenzamide derivative with carbendazim and/or diethofencarb and/or iprodione and/or benomyl. One would have been motivated with a reasonable expectation of success to combine these fungicides to form a fungicidal composition.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Wiedmer (US 4,835,169), Pommer et al. (US 3,954,993) and Shapiro et al. (US 2,899,437)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Danielle Sullivan whose telephone number is (571) 270-3285. The examiner can normally be reached on 7:30 AM - 5:00 PM Mon-Thur EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/SHELLEY A. DODSON/
Primary Examiner, Art Unit 1616

/Danielle Sullivan/
Examiner, Art Unit 1616